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ABSTRACT

Innovations in educational organizations have not received the same attention as those in business organizations. To flourish at a school-organization level, and be replicated in other institutions, the mechanisms that sustain and encourage innovations must be understood clearly. A study examined innovations adopted at four schools to uncover the system and processes conducive to their sustenance. The four schools identified use a range of innovations in the areas of pedagogy, curriculum, evaluation, administration, and resource mobilization. Findings indicate the important role of leadership, particularly during formative stages. Openness in vertical and horizontal communication and establishing a wide network appeared to be critical in later stages of program implementation. The innovative schools developed effective systems for monitoring, mobilizing community support, establishing procedures for teachers' training, and instituting participative systems of management. The findings indicate that innovations do not have to be resource intensive and involve exceptional individuals, but require sustained effort. Implications for management of innovations in schools and directions for future research are examined. (Contains 72 references.) (TEJ)

INNOVATIONS IN SCHOOLS: IDENTIFYING A FRAMEWORK FOR INITIATING SUSTAINING AND MANAGING THEM

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ABSTRACT

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Innovations in business and industrial organisations have been subject matter of intense study and research for a long time, though innovations in educational organisations have not received the same attention as industrial organisations. If innovations are to flourish at a school-organisation level and be replicated in other institutions, it is critical that the mechanisms which can sustain and encourage them be understood clearly. The present study has attempted to examine the innovations adopted in four schools and thereby to uncover the system and processes which are conducive to their sustenance. The four schools identified, located in different parts of the country, have utilised a range of innovations at school level in the area of pedagogy, curriculum, evaluation, administration and resource mobilisation. Findings indicated the important role of leadership in adopting innovations at school level, specially, when the school is in its formative stages. Subsequently, openness in vertical and horizontal communication and establishing a wide network with individuals and institutions outside also appeared to be critical. Leaders in all the schools studied were found performing this crucial role. The innovative schools had also developed a well defined and documented systems of review and monitoring, mobilising community support, had established procedures for teachers' training and growth and instituted systems of decentralised and participative systems of management. Findings also indicated that practising innovations does not necessarily require to be resource intensive, does not require exceptional individuals for their management but do require sustained and continued effort over a long period of time. Implications for management of innovations in schools and directions for future research are discussed.

Innovations In Schools : Identifying A Framework For Initiating , Sustaining And Managing Them

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The process of innovation has been a matter of intense research and study for many years (Anderson and King, 1993; Damanpour, and Evan, 1984; Van de Ven, and Rogers, 1988). Most of these researches have been conducted in Europe, U. K. and U. S. A in business and industrial organizations. Compared to these, researches on innovation in the area of education have received much less attention even in the Western world and far less in India. Furthermore, the attention that innovation in education has received in the Indian context mostly relates to efforts made by individual teachers. This has helped highlight how creative efforts could contribute in the development of pedagogies for enhancing motivation of teachers and children and enriching classroom learning (Chand, Shukla, and Solanki, 1998; Sabharwal, 1993, 1994). These endeavours are important from the point of view of pedagogy and learning at the level of a particular class or in a subject, but do not offer any insight about challenges faced in introducing innovations at the school level, which in comparison to the individual level innovation is far more complex and challenging. If these individual level innovations are not encouraged and supported at the institutional level, it may be difficult to expand or even sustain them. Though the need to adopt innovations at the school level has been underscored repeatedly (Singh,1990) practical examples of such innovations are scarce, and even more rare are research endeavours which could elucidate these processes from an organizational perspective in educational organisations. Examining innovations at the school level would help provide insights about factors that facilitate initiation and sustenance of innovations in school. **The present study aims to identify some of the factors which help in initiating, sustaining and managing innovations in educational institutions, particularly, schools.**

To enable the reader to view the problem in the appropriate perspective, the first section will focus on a brief review of the concept of innovation and researches which relate to

the adoption and implementation of innovations in organizations. Thereafter, findings of selected studies on innovation in education, particularly in the Indian context, have been reviewed. This is followed by an outline of the present study.

Review of concept and research studies

Innovation : Its nature and meaning. The variety of ways in which the concept of innovation has been defined by researchers reflects the nature of discipline (Gopalakrishnan and Damanpour, 1997), the level at which innovation is conceptualized (Amabile, 1988; Kanter, 1988), and whether it is being conceived as a product or process (West and Farr, 1990). One of the earlier definitions describes innovation as an idea, practice or material artifact perceived to be new by the relevant unit of adoption (Zaltman, Duncan, and Helbek, 1973). Later, Andersen (1993) conceptualized innovation as the emergence, import or imposition of new ideas which are pursued towards implementation, through interpersonal discussion and successive remoulding of the original proposal over time. This contemporary definition not only describes the nature of innovation, but also refers to the intrinsic process of implementation. With the progress of research the concept of innovation has also been refined and a more comprehensive understanding of innovation seems to be emerging. Recently, innovation has been defined as the introduction and application within a group, organization, or wider society, of processes, products or procedures new to the relevant unit of adoption and intended to benefit the group, individual or wider society (West and Farr, 1990). Encompassing several features of earlier definitions of innovation, this interpretation

1. Visualizes innovation either as a product, process or procedure in the realm of technological change or in the area of human resource management.

2. Recognizes that innovation could take place at the individual, group, organizational or societal level.

3. Expands beyond the notion of absolute novelty (Zaltman, Duncan and Holbeck, 1973) and proposes the idea of relative novelty. Thus, an idea being introduced in an organization from another organization will be considered an innovation in the new organization.

4. Does not limit the benefit of innovation to the individual, group or organization, but provides scope for its advantage to society in general.

The above definition has taken a very comprehensive view of innovation, incorporating any product, procedure or practice. It is applicable to a wide range of organizations, thereby implying that irrespective of the nature of innovation and organization, commonality of processes will exist at the individual and organizational levels.

Factors affecting introduction and sustenance of innovation in organizations

Researches on innovations in organizations have focused on a variety of factors which either facilitate or hinder the process of innovation. Some of the salient factors identified through researches are discussed below.

Leadership. Leaders' characteristics have endured as a major focus of research in innovation. Based on a review of research studies, De Ven (1986) argues that innovation is not the enterprise of a single entrepreneur. Instead, it is a network building effort that centres on the creation, adoption and sustained implementation of a set of ideas among people who, through transactions became sufficiently committed to these ideas to transform them into `good currencies'. Within the organization, institutional leadership is critical in creating a cultural context that fosters innovation and helps in establishing organizational strategy, structure, and systems that facilitate innovation. In fact, there is a growing acceptance that innovations in an organization require a special kind of supportive leadership (Roberts, 1984). Other researchers have contended that different stages of innovation require different types of leadership, e.g., the initiating phase would require a `nurturing' type leadership, while the implementation phase would require a `championing' type (Anderson and King, 1993).

Also, clear vision of the leader and a sense of mission for the organization has been found to be a key element in innovation (Bennis, 1989; Kanter, 1983; West, 1990). Manz, et al. (1989) examined the leadership style in the development of seven major innovations in different organizations. They found that multiple leadership approaches were appropriate for different innovations and at different points of time in the innovation process. Anderson and King (1991) suggested that regardless of the leaders' overall style, six

issues are of considerable importance in the introduction of innovations: encouraging individual initiative, clarifying individual responsibilities, providing clear and complete performance evaluation feedback, maintaining a strong task orientation, emphasizing human resources, and demonstrating trust in organization members. Several other studies have highlighted the role of head teachers in schools, who are in a leadership position and have underscored the need for a supportive and task oriented leader to enforce the norm and inspire the team members unremittingly. (Hoyle, 1974; MacDonald and Rudduck, 1971; Nichols, 1979).

Members of organizations. Members of organizations who are the actual functionaries in the development and implementation of innovation are of equal importance. Some people espouse innovations eagerly and unhesitatingly, while others are more cautious, reluctant, and under some circumstances may even reject them entirely. These two categories of persons have been described as `innovators' and `resistors'. Drawing on researches from industrial engineering, rural sociology, anthropology, and education, Rogers, (1965) and Nicholls (1983), have described `innovators' as venturesome individuals, *`avante garde'* and eager to take risks. Miles (1964) has described `innovators' as being benevolent and creative and possessing authenticity and enthusiasm. Such individuals have also been referred to as `idea champions' (Bowen and Fry, 1985), making extraordinary efforts to promote innovation.

On the other hand, `resistors' of innovation in organizations have been identified as being traditionalist and generally confronting change (Barnes, 1967). Resistance is found to be emerging from the dispositional hostility to novelty (Bedeion, 1980) or due to ideological differences with the top management (Hosking and Anderson, 1992).

Burningham and West (1995) argued that personality dispositions of individuals were superior predictors of changes in levels and quality of work level innovations over time than were factors of group climate. The basic propensity to innovate among a group of individuals will not only produce the required output, but also create the necessary processes required, and consequently effectuate desired changes in the work climate.

Structure. The effect of structural characteristics of an organization on the adoption of innovation has been examined in numerous studies (Douns and Mohr, 1976; Holbek, 1973; Rogers, 1983), though the findings are not adequately conclusive. Zaltman, Duncan, and Holbek (1973) reported that three structural variables, namely, centralization, formalization and complexity, have opposite effects on pre and post adoption stages of the innovation process. According to them, innovation initiatives are facilitated by structures which exhibit low centralization and formalization and high complexity, whereas implementation is expedited by highly centralized and formalized, but simple, structures.

Another structure related variable which has received measurable attention is stratification within organizations. A review of studies (Kanter, 1983; Pierce and Delbeceq, 1977) suggests that high stratification inhibits innovation. It may be reasoned that stratification leads to a preoccupation with status and hierarchy which discourages creative thinking and risk taking, and as a consequence, few innovations are initiated. Findings of Child (1984) and Staw (1990) suggest that matrix structures in organizations encourage lateral communication and thereby promote innovations.

A basic shortcoming that characterizes most of these studies is the lack of clear-cut guidelines with which to examine the structures suitable for innovation. Organizations establish systems and procedures for maintenance and routine tasks, but when a need to innovate arises, the existing arrangements prove inadequate. Therefore, it may be deduced that for innovations to take place, organizations need to create systems which are able to cater to routine tasks as well as provide space for individual and group creativity to flourish.

Organizational size and resources. A number of studies have examined the relationship between organizational size, resources, and innovation; however, the direction of the findings is not readily evident. Large organization size is conducive to innovation because the process of building up firm-specific competencies, high differentiation, and high levels of elaboration between professional and functional specialist groups facilitates innovation (Pavitt, 1991). On the other hand, it is also reported that smaller organizations have been more inventive than larger ones in producing new technological products (Rogers, 1983). In a separate review Utterback (1974) reported that organization size was not associated

with the speed of innovation. Some recent researches regarding team size and innovation suggest that teams are most effective when they have sufficient but not greater than sufficient numbers of members to perform the group task (Guzzo and Shea, 1992; Hackman, 1990). Some other researchers (Jackson, 1996; Poultan, 1995) also suggest that very small teams (two or three members) lack the diversity of viewpoints and perspectives necessary for innovation, whereas large teams (more than 12 or 13 members) become too unwieldy to enable effective interaction, exchange, and participation.

Similarly, research on innovation and organizational resources does not indicate a linear relationship. A certain level of resource availability is an essential prerequisite for undertaking any innovation; however, abundance does not necessarily accelerate the process. The notion of slack resources is invoked to suggest that unused resources are likely to be used to invest in developing new and improved ways of doing things. Within organizations King and Coventry (1992) found examples of low cost but highly effective innovative solutions to communication problems occurring between hospital doctors and general practitioners. Similarly, Payne (1990), in a review of United Nations studies of research team effectiveness, concluded that no evidence has been found to suggest that more resources and better facilities necessarily lead to better scientific performance.

Organizational climate and culture. Although an apparent consensus regarding the precise dimensions of pro-innovation climate and culture has not been reached, several aspects have been suggested as facilitating or inhibiting innovation (Morgan, 1986; Nystom, 1990; West and Farr, 1989). Some of the notable ones include : support for ideas and willingness to tolerate their failure; challenge, freedom, and constructive controversy in climates; egalitarianism, risk taking, and norms for innovation in cultures. A number of educational and industry based organization studies have demonstrated that a supportive climate facilitates effective innovation (Krapp, 1963; Thistlethwaite, 1963; Torrance, 1963).

In a study of 54 manufacturing organizations, Pillinger and West (1995) found that innovative organizations had climates characterized by an emphasis on quality, effective communication, team-work, inter-departmental co-operation, reflexivity, and support for innovation. Nystrom (1990) views innovation as a product of the interaction between

organizational strategy and structure, with climate and culture as important intervening variables. In a large Swedish chemical manufacturing firm, he found that most innovative decisions were taken in a climate which strongly encouraged risk taking and debate and was high on challenge, idea support, playfulness, and freedom. The opposite of this, which he termed as `positional', was low in almost all the above dimensions. .Khandwalla (1984) has suggested that the management of an innovative organization should be willing to take risks and must believe in flexibility and adaptability. Nagabrahmam (1980) found that departmental climate and commitment of leadership to the innovation is crucial for success of innovations in organizations. In a research on an Indian scientific research organization Dayal (1991) found lack of open communication, resulting in the predominant feeling of distrust and insecurity, as one of the main factors inhibiting innovations.

Group Processes. In a recent study, West and Anderson (1997) identified certain factors which are crucial for innovation at the group level. The most important among them was clarity or specificity of goals and objectives which facilitate innovation by enabling development of new ideas. The second factor was members' participation in decision making and objective setting. It seems only logical that when information and influence over decision making are shared within the team and there is a high level of interaction among team members, the cross-fertilization of perspectives would spurn creativity and innovation (Pearce Ravlin, 1987; Porac and Havard, 1986). Fridee (1975) found that participation resulted in higher levels of innovation among individual work. The third aspect has been termed as `task orientation' (West, 1990) which is a result of constructive criticism, shared concern for quality, and high standard of performance. These processes improve quality of decision making and thus facilitate innovation. The last factor relates to the support for innovation or innovative attempts, in terms of being rewarded rather than punished. West and Anderson (1997) reported this as one of the principal predictors of innovation.

Overview

The foregoing review, though not exhaustive, provides a general overview of studies on innovation from an organizational perspective. There seems to be some degree of

concurrence among researchers regarding the role of leadership, personal dispositions of members, support for innovation, communication in organizations, and size of the group in initiating and sustaining innovations. However, in other areas like structure of organization, organization size, climate, and culture, findings are not as decisive. Several moderating variables, such as nature of product or service, environment in which it is located, and the nature of innovation, intervene and render more complex generalization about their ultimate effect. Nevertheless, these findings provide suggestive indications as to possible factors and processes that effect innovations in an organization.

Innovations in Educational Organisations

A majority of these studies have been conducted in the industrial and business sectors and therefore their applicability to educational institutions, particularly schools, may be limited. Any innovation in a school, be it a product or process, is delivered primarily through teacher-student interaction. Second, impact of an innovation is not immediately discernible. In fact, the time lag between delivery of an innovation and its net impact may be extensive and in some cases interminable as the impact may not ever be specifically determined. In other words, the quality and extent of delivery of an innovation in a school can be ascertained but its impact may not be explicitly quantifiable. Third, unlike business and industry, innovations in schools are generally not driven by profit motive or competitive market forces. On the contrary, because of excessive demand for education, especially in India, even those schools which offer services below the optimum level continue to be in demand. All these factors mainly result in establishment and perpetuation of `routine' kinds of schools rather than `innovative' ones. At the same time the need for innovation in schools has been repeatedly underscored (Dave and Murthy, 1993) although the direction of research has rarely focused on organizational aspects of educational innovation. In the following section, a brief review of researches in education, particularly in the Indian context, has been made.

Research on Innovation in Education: The Indian Context

Research studies on innovations in education may be classified into two groups: (a) Individual efforts of teachers in developing a teaching tool or pedagogy, or a method for training of teachers; (b) School related organizational factors associated with innovations.

Innovations at a teacher or classroom level. Innovations at the individual teacher level relating to production of innovative teaching material, textbook or development of a specific pedagogy have been extensively documented (Sabharwal, 1993, 1994 and 1995). These represent a wide range of efforts in almost all subjects at the primary and secondary school level throughout India (Singh et al., 1979; NCERT, 1984, 1993). Such publications furnish a valuable overview of individual creativity of teachers manifested nationally; however, they do not provide insight about the process of generation, practice and subsequently diffusion of these innovations to other institutions.

A unique study (Chand, Shukla, and Solanki, 1995) examined and analyzed the role of innovative teachers and teacher generated innovations in improving macro-level educational performance. Through detailed case studies of several primary level school teachers, practical aspects relating to how teachers could contribute not only in classroom teaching, but also in areas like improving relationships, raising resources for the school, and in building peer capacity, have been demonstrated.

Studies at school-organization level. Subba Rao (1963), on the basis of a study of 83 schools in Gujarat and Andhra Pradesh, concluded that various aspects of a school which contribute in its functioning are important for introducing innovation at the school level. There are several other researchers (Bhogle, 1969; Bhogia, 1993; Doctor, 1973; Gulati, 1982; Pillai, 1974) who have studied organizational factors associated with innovation in school. Many of these studies have either applied an adapted version of the Halpin and Croft measure on organizational climate or developed their own measure for assessing innovativeness and associated factors. Several variables like communicability, efficiency, structure, and facilitation have been found to be associated with innovation. At an individual level, personality of the headmaster, attitude and teachers' proneness to change as well as their own tendency to innovate are significant in introducing or sustaining innovations. Other researchers have reported physical amenities, salary, and perks as other important factors in promoting innovations.

These studies do provide useful information about innovation in schools and highlight factors which are associated with it. However, many are based on perceptions of various stake holders, who are not necessarily part of an innovative school. In addition, most of the studies have been conducted utilizing surveys or structured questionnaires. Therefore, the nature of the findings do not provide sufficient insight about the processes through which innovations are initiated and managed in schools. If innovations are to be initiated, sustained and replicated in other schools, a deeper understanding of various processes and systems which facilitate or inhibit innovation would be very useful. The present study attempts to explore some of these aspects.

Objective of the present study

The present study focuses on schools which have been implementing innovative practices in the area of teaching methodology, curriculum design, evaluation, resource mobilization or administration for more than five years. Based on intensive analyses of such school systems, the study has attempted to identify factors which help facilitate and sustain innovations in the school system. Specifically, the study endeavours to address the following issues:

1. Role and nature of leadership in promoting innovations in school.

2. Structure of the institution in terms of hierarchies, delegation of power, decision making processes, and rules and regulations.

3. Prevailing system of communication: vertical (upward and downward), horizontal, inter-departmental and interpersonal communication, and communication between the school and the community being served.

4. Institutional support processes for initiation and sustenance and diffusion of innovation.

5. Challenges of introducing innovations and mechanisms to deal with those challenges.

6. Process of feedback and evaluation to verify the effectiveness of innovations.

METHODOLOGY

Framework for the study

A qualitative research design (Maxwell, 1998) has been used with a focus on processes associated with innovation generation and sustenance in schools. One of the frequently utilized frameworks of research in educational innovation is the P.R.D.D. model (OECD, 1973), developed by Centre for Educational Research and Innovation (CERI) which was used extensively in educational institutions in the U.K. and several other European countries through case studies. The P.R.D.D. model focuses on first delineating the policy (P) basis of the innovations and then linking these policies to the research(R) and development(D) and dissemination(D) of innovations.

In another study, Fullan (1994) has suggested that educational innovations may be examined through four perspectives: the characteristics of innovation, strategies of implementation, characteristics of the adopting unit, and characteristics of the external system. The present study has utilised both of the above mentioned perspectives in identifying the facilitating and inhibitory factors associated with innovations in school. Each innovative school was studied with respect to its historical background, the nature of innovation being practiced, and arrangements made both within the school system and outside of it, to effectively carry out the innovations.

School was considered as the unit of study and analysis, the selection of which was based on the following criteria:

1. The school should have adopted certain innovative practices which are different from other schools in the area and which have apparently resulted in some degree of improvement in the teaching and learning process. The innovative practice could be in the area of classroom teaching, curriculum design, resource mobilization or management of the school system.

2. The innovative practice should have been implemented in the whole school or in a significant subsection of the school for at least five years.

3. The school should have classes at least up to fifth standard and a minimum of 20 teachers on its payroll.

Besides the above criteria, the emphasis of the study was on such efforts which can be replicated by other individuals or institutions.

Data Collection and Analysis

Considering the above criteria, about 50 schools were initially contacted. On the basis of information supplied by them, six schools were short listed and finally after preliminary visits, two schools were dropped and four were included in the final study. A two stage triangulation approach (Maxwell, 1996) was utilized for data collection.

Preliminary information was obtained about the innovations being carried out by the school in its pedagogy, structure, and various aspects of its functioning. Based on this a semi-structured questionnaire was developed for interviewing principals and teachers. Interviews focused on the research questions, keeping in view the specific innovation being carried out in the school, with the objective of identifying the unique processes and structures associated with the particular innovation in a particular school.

Data gathered from these sources have been presented in the form of case studies and subsequently analyzed using contextual as well as categorical strategies to obtain a comprehensive account of the processes operating in the schools. Based on these case studies, the general factors associated with effective implementation of innovations in schools have been identified.

THE INNOVATIVE SCHOOLS

In the previous section, the process and criteria used for selection of innovative schools has been described. Keeping these in view, four schools were selected for the present study. In this section, basic details of all the four schools are provided in the table given

below. This is followed by a detailed description of innovative approaches being practiced by each school.

Table 1

	Name of the School			
	BIS*	Anandalaya	AmarJyoti	Shaishav
Year of Establishment	1962	1984	1982	1980
Range of Classes	K.G.-10th	K.G.-12th	K.G.- 8th	K.G.-12th
Total Enrollment	362	700	562	750
No. of Teachers	42	65	34	68
Board of Recognition	ICSE	CBSE	CBSE	Gujarat Board
Regular grant from Government	None	None	None	None
Location	Mumbai	Anand	Delhi	Vadodara

*BIS = Bombay International School

Bombay International School

The Bombay International School (BIS) was established in the form of a Parents' Co-operative and continues in the same form even today. Parents are interviewed before admission is granted to a child and if found suitable, are enlisted as 'Parent members' of the Bombay International School Association and the child is admitted to the school. Over the years, the number of parent members has grown significantly and the school is popularly recognized as a 'Parents' Cooperative'. The involvement of fathers and mothers

in various academic and extra curricular activities has added a unique dimension to the school and has helped enrich its life.

The school functions in an integrated manner. However, for the purpose of understanding its innovations, the activities are being classified into three broad sections viz.: (a) Teaching and academic arrangements, (b) Administration, and (c) Extra curricular activities.

Teaching and academic arrangements

The school utilises an **integrated, child centered, project based teaching approach** up to class VIII. In all classes, the subjects are integrated around a theme and children conduct projects in different subjects related to that particular theme throughout the year. Teachers provide extensive feedback which takes into account the performance as well as the effort put in by the child. Syllabus for all the classes is determined by the guidelines provided by the ICSE board, but teachers are provided full autonomy in taking decisions about the pedagogy and the teaching material they want to utilise. Teachers also engage in **team teaching** in subjects like Environmental Science. Teachers from Economics, Geography, Biology, Botany come together and handle the subject jointly, while one teacher functions as the coordinator.

Subject Coordinator. For each subject offered by the school, one senior teacher is appointed as a Subject Coordinator. S/he undertakes the responsibility of coordinating the teaching activities in their respective subject in all the classes. Other teachers in that subject area prepare their teaching plan, share it with the coordinator and seek his/her guidance for refining it. In addition, the coordinator facilitates project assignments and evaluation and makes efforts to ensure continuity of subject matter in that particular subject from one class to the next.

Teachers' recruitment and enrichment. Apart from the qualifications prescribed by the ICSE board, genuine interest in teaching is accorded considerable weightage in the selection of teachers. All newly appointed teachers are associated with senior teachers so that they can be given a thorough orientation about the school, its features and systems and receive constant inputs and guidance from subject coordinators and other senior teachers.

Opportunities are regularly provided to the teachers to attend training programmes and workshops within the country and abroad for updating their knowledge and skills. The school management makes substantial provisions in the school's annual budget for the enrichment and training of teachers.

Teachers' log book. At the beginning of each year, all teachers, with the help of their coordinator, develop an annual academic plan. Lesson plans for each unit of teaching are developed on a weekly basis and discussed with the subject coordinator in weekly meetings. The annual plans and the weekly teaching plans are recorded in the log book to facilitate guidance and supervision by the subject coordinator. The log book also includes grade sheets for maintaining the grades and record of each student in the particular subject.

Teachers' duty list. Besides their teaching assignments, teachers are responsible for a variety of administrative tasks of the school. Based on past experience, a list of duties has been generated to facilitate effective management of the school. On the first day of the academic calendar, each teacher is allotted his/her duties for the year to ensure role clarity and smooth functioning.

Class mother. For each class, one of the child's mother is appointed as the 'Class mother'- usually she is one who can spare some time and establish contact with other mothers. She networks with all the parents of children in that class and liaises with the school and class teacher to organize activities for providing support to teachers.

Appointment of principals. The school has been in existence for more than thirty five years, and so far has evolved under the leadership of six different principals. The Core Committee and other senior members, associated with the school, have taken care that the appointment of a new principal in the school not only results in able leadership but also facilitates in maintaining the basic structure and functioning of the school. Whenever an external candidate has been selected, efforts have been made to familiarize her/him with the school system in great depth before finalizing the appointment. In other instances, a senior qualified teacher, with a long association with the school, has been appointed Principal so that continuity in the school system is assured.

Innovations In Administration

As mentioned earlier, the school functions as a Parents' cooperative. Mothers and fathers of children contribute extensively in implementing various tasks and activities of the school and provide support to teachers, the librarian and to the school administration. Some of the committees through which involvement of parents is channelised are maintenance and repair committee, admissions committee, parents' participation committee, library committee, committee for co-curricular activities, kitchen and food committee, academic committee, sports committee, computer committee and core committee.

All these committees consist of eight to twelve members and are appointed by the Board of Governors. The Admissions and Academic committee start functioning before the school reopens, while other committees function during the academic year and meet at least once a month. Although, committee members interact extensively with teachers and the staff and take responsibility for several important functions, their role is strictly limited to non -teaching activities. Teaching and evaluation are managed exclusively by teachers.

Extra Curricular Activities

Almost all the extra curricular activities are integrated with the teaching programme of the school and are organized with the active support of intellectuals, social activists and well wishers of the school. Some of the main extra curricular activities are described below:

Interaction with underprivileged children. BIS is an active participant of 'Mel-Jol', a programme coordinated by the Tata Institute of Social Sciences. In this programme, children of neighbouring municipal schools work together with children of BIS on various projects of crafts, arts and games. Special assemblies, recitation and elocution contests and picnics are organized once a term. This has been instrumental in breaking class barriers and in promoting better understanding between children from two diverse socio-economic backgrounds.

Participation in Harvard Model Sessions. The school has started participating in the Mock sessions of UN General Assembly or its affiliated agencies. Every year, a group of

students, accompanied by a teacher, participates in these sessions. This provides the students a new perspective to the problems of the world and helps develop a more liberal understanding about international issues.

Combat Communalism. Following the large scale communal riots in Bombay around 1992, BIS, in collaboration with a group of journalists and social activists, initiated this programme to counter certain prejudices that children had developed. Through this programme, children are encouraged to express their fears, inhibitions and prejudices and a variety of media are utilized for the purpose viz. songs, music, drama, essays and painting. Adults facilitate the process and encourage sharing of different points of view. The programme has helped a great deal in allaying the fears and prejudices from children's minds.

ANANDALAYA

Presently, `Anandalaya' has classes from Kindergarten to XII, with two sections in each class. There are no examinations upto class V. However, class tests are conducted regularly and children are provided in-depth and extensive feedback throughout the year. At the end of the year, overall grades are assigned to indicate the child's performance in each subject. The teaching-learning process involves working on varied projects and activities. Teachers follow the broad curriculum decided upon by the school; however, they are provided full autonomy to decide upon the pedagogy and the pace of teaching. To prepare the children adequately for the board examinations conducted at the end of class X and XII, the school has introduced the system of annual examinations from class VI onwards. However, the emphasis on activity based teaching is maintained. An elaborate set of processes and committees has been evolved by the school to implement and operationalise its philosophy, approach and vision of education. A brief description of the school's system is given below:

Process of evaluation and feedback. The purpose of evaluation is to generate an ongoing assessment of students' performance. Children in the primary sections have to appear for five rounds of weekly tests for each subject. On every Tuesday tests are conducted by

rotation for each subject. In addition, several surprise tests are conducted in each subject. Of all the surprise tests, the two in which the child has scored the lowest marks are dropped and the rest are considered in determining the final grade. The purpose of the weekly tests is to develop a cumulative score for assigning the overall grade, whereas the surprise tests help the teachers to monitor the extent to which children are comprehending and grasping the inputs provided.

The question papers for the weekly test are designed to evaluate the students' understanding, application, knowledge and skills in a particular subject. The school has prepared elaborate guidelines for designing the question papers and new teachers are oriented sufficiently for this task.

Subject coordination. All classes from Kindergarten to XII have two sections each. For every class, each subject is taught by different teachers in the two sections. They are given complete autonomy with respect to the teaching method they wish to adopt, the book or material they choose to teach and the pace they choose to teach at. However, for evaluation, identical test papers and examination papers are used for both the sections. The 'subject coordinators' are responsible to ensure that these processes function smoothly. Uniformity in teaching and evaluation is facilitated by subject coordinators through (a) Fortnightly planning (b) Daily log book and (c) Weekly meetings.

All subject teachers are expected to record their overall plan on a fortnightly basis in the planning book and then detail it in the daily log book. For this, they consult the subject coordinator as and when required. In addition, subject coordinators also hold weekly meetings with both the teachers to facilitate and develop innovative participative ways of teaching. Test papers for weekly tests and mid term and final examinations are also reviewed by the subject coordinators, before they are finalized. Similarly, guidelines for test papers are also evolved by the subject coordinators in consultation with the teachers so that uniformity in evaluation is maintained across sections.

A teacher who has a good command over her/his subject area and possesses an adequate understanding and experience of the systems and overall approach of the school is

appointed as a ' subject coordinator'. Usually, this appointment is for a term of two to three years and is made by the Principal in consultation with the Headmistress and staff.

Supervision. The primary objective of introducing supervision of teachers was to facilitate teaching and improve the teachers' capacities and skills rather than evaluating them. Every teacher is supervised by the headmistress or principal. If in a subject area, the principal or headmistress do not have the requisite background or experience, inputs are sought from the respective subject coordinator. The subject coordinator provides inputs on the manner in which the subject matter has been handled by the teacher, whereas the principal or headmistress review his/her overall teaching strategy.

Group coordinators. The students of the school are divided into four groups. Similarly, teachers are also assigned to each of these four groups. Their responsibility includes guiding and training students in various sports and extra-curricular activities. Each group has a student leader as well as a coordinator from amongst the teachers. Once assigned to a group, the child continues to be in it till s/he finishes school. However, teachers stay with a particular group for a limited period. This ensures that students get the benefit of guidance of different teachers and the teachers also get to know most of the students. One teacher is appointed, by rotation, as `group coordinator', and s/he facilitates coordination and planning among all the groups within the school and also liases with other schools. Teachers share this responsibility so that all of them gain experience and develop competencies in coordinating school activities. The four group leaders plan for all the activities at the beginning of the session so as to facilitate coaching and training of students.

Bulletin Boards. Each class has nine bulletin boards, one for each subject, which is managed by the respective subject teachers. Students are encouraged to collect, collate and display a varied range of information and stories related to each subject. In addition, there are four bulletin boards in the main lounge, which are managed, through rotation, by four different teachers for a period of two weeks each. Each bulletin board is dedicated to a particular theme of interest and value to children.

Teachers' responsibilities and incentives. In addition to the above responsibilities, teachers perform several administrative functions and duties and all teachers assume one or more duties by rotation. Since teachers participate and assume responsibility for a variety of tasks, they are expected to teach no more than 24 periods per week. Depending upon their experience and background, teachers are placed in one of the three salary grades and are provided opportunities for promotion once in three years. An elaborate system has been developed by the school for teachers' review and performance which provides relevant data for deciding on promotions. Any teacher, irrespective of the level of class he/she is teaching, can be promoted to the highest grade.

AMAR JYOTI INTEGRATED SCHOOL

The basic beliefs that guide the approach to integrated education at Amar Jyoti are:

* Each child is unique, worthy of respect regardless of talents, disposition and abilities and has the potential to acquire skills and develop

* A child's educational programme has to be designed, developed and implemented by a team, based on her functional assessment.

* Parents are integral members of the interdisciplinary team.

* All children must get educational opportunities to develop skills which facilitate maximum interaction and participation in the community.

Integration, at Amar Jyoti, signifies the process of bringing the `part' to the `whole'. It is the opposite of segregation where a group with special needs is identified and provisions are made for them in separate settings, thereby increasing the social and physical distance between them and the able-bodied. Integration implies that differently abled enjoy equal opportunities for growth and development and are treated as equal partners in society. It implies mutual sharing of the physical facilities and processes towards reduction of social distance.

Modes of integration. The school offers three different modes for integration :

a) The **Main school** with classes from nursery to VIII with a 1:1 ratio of able-bodied and orthopaedically disabled children. Admissions to the school are entertained at the nursery level and then in class VI. The rationale for initiating the process of integration at an early age is that_prejudices and stereotypes are not yet well formed and thus it helps both the groups of children to accept each other naturally and with ease. Studying together provides opportunities for highlighting the abilities of the disabled and this aids in changing attitudes of children and parents.

The school follows the curriculum prescribed by National Council on Education, Research and Training, though certain adaptations have been made to suit the children's needs, for example the addition of supplementary co-curricular activities and the vocational training component. The ultimate aim is to mainstream the children - so far five batches of children have been mainstreamed into regular schools.

b) A **special section** has been started for children with learning difficulties and associated disabilities. Due to their limited capabilities to comprehend and understand, it is not possible to integrate these children totally in the main school. Depending on their levels of learning, they are gradually integrated for different subjects in different classes. Before introduction into a class, the teachers are oriented about their special needs and the special attention they might require. Presently in this section there are about 52 children ranging in age from 6 to 16 years who are slow learners with associated disabilities like cerebral palsy, dyslexia and borderline mental retardation. They are divided into four sections based on their levels of learning and functional abilities. The children are integrated with the regular school in sports and music, are being trained to manage a tuck shop where they sell goodies and gain proficiency in counting money and are also placed in vocational training units.

c) A section for **Non Formal Education** admits older children who have not studied earlier or have discontinued studies. This section does not provide non-formal education in the traditional sense of the term, but prepares a child for integration into the regular school or in the special section. There are 30 children in the non-formal section who are assisted by two teachers.

Integration through Vocational Training and Extra curricular activities and sports.

Although attempts are made to integrate children wherever possible into the regular school, for some children, learning a trade is the answer for their rehabilitation. Amar Jyoti has a variety of **Vocational Training Programmes**, that are offered twice a week to every child. The programmes include Textile Designing, HMT watch servicing and repair, computer training, carpentry, stitching, knitting, screen printing etc.

All children get an opportunity to participate in **extra-curricular activities**. Twice a month, children participate in inter-house competitions. Also, interaction with other schools is encouraged through mutual invitations to participate in competitions. This also helps to generate awareness amongst children and staff in other schools about the need and impact of integration on the lives of children. Children also spread awareness about their capabilities through cultural performances in the community, for example, in 1995 and 1998, the integrated group of school children performed in a float and participated in the Republic Day Parade in New Delhi. These are some of the many efforts towards mainstreaming the children from Amar Jyoti.

Integrated Sports. Recognizing the importance of sports in a child's development - intellectual, social, emotional and physical, Amar Jyoti has pioneered the concept of integrated sports in India and implements it in all seriousness in the school. While Special Olympics have been organized successfully for different categories of the disabled, no effort has been made so far for organizing events for an integrated group.

The philosophy behind integrated sports is to bring the able bodied and differently abled together on the ground, equalizing their participation by 'thoughtful choice of events' and proper monitoring by concerned professionals. For instance, in a three legged race, the leg of an able-bodied and an amputee with prosthesis is tied together to equalize their strength. Similarly, in a relay race, all the able-bodied may run together and hand over the baton to the next group of children wearing braces.

The first National Integrated Sports Meet was organized in February 1990 by Amar Jyoti where over 700 children, able bodied and differently abled congregated from 13 states to participate in various sports events during a two day meet. The meet was co-sponsored by

a host of agencies - local, national and international funding agencies. For the first time in India, children competed on equal terms, since the events were chosen to emphasize children's 'special abilities'. Importance was given to participation rather than competition. This has now become a regular annual feature.

Physical facilities. An important consideration in the entire process of the construction of the Amar Jyoti Centre and the school buildings has been that of accessibility. The school and the centre have a ramp that allows students and patients free access to the upper storeys. In the school, the classroom organization is adapted to the need of its students. Space is created for wheel chairs. For children who walk with the support of crutches, special space has been provided at the back of the chairs to hold the crutches. Three of the eleven buses have also been fitted with collapsible ramps for children using wheel-chairs.

Teacher Training and Enrichment. The school has 34 teachers, including trained subject teachers and special educators. Realizing the special challenges faced by them in teaching children in an integrated environment, Amar Jyoti creates repeated opportunities to update their information and skills.

Amar Jyoti also offers a one year Multi-Category Teachers Training Course in Special Education for Cerebral Palsy and other disabilities. The objective is to create awareness about mainstreaming of children with disabilities and capacity building of teachers to cater to the special needs of children.

The teachers are paid a consolidated salary which is not at par with other Government schools but adequate incentives are given for academic enhancement, participation in training programmes and developing innovative material for teaching.

Team Efforts in problem solving. The teachers participate regularly in a weekly case conference to discuss individual cases that require therapeutic intervention. A monthly conference involving a multi-disciplinary team is held to discuss specific problems of children requiring multiple forms of assistance for integrated development. The team collectively plans a programme of action for a particular child as well as gives suggestions for restructuring his/her environment. Intervention is done through various therapies which include behavioural, family, music and dance therapies etc. Referrals are then made

to other concerned specialists within the institution and outside, depending on the child's needs of treatment.

In addition, the teachers jointly plan a detailed curriculum design for each subject on a monthly basis. The design includes the content, pedagogy and learning/teaching materials to be used for each content area. This exercise entails sharing of experiences and information and promotes team spirit and collaborative teaching efforts.

Home Training Programme (HTP) and Parent Education. Parents of disabled children between the age of 6 months to 3 years visit the Amar Jyoti Centre on a monthly or bi-monthly basis to receive training in helping their children develop cognitive, motor, learning, social and self-help skills. Parents of disabled children have formed support groups that meet to lend the necessary help and assistance to each other to facilitate the child's development.

Child Guidance Centre (CGC). Children from the school who need help with emotional, behavioural and psychological problems are referred to the CGC. The CGC has a team of specialists that includes psychologists, special educators, physiotherapist, occupational therapist, speech therapists and vocational counsellor.

Community Involvement and Networking. The main challenge faced by Amar Jyoti in promoting the concept of integrated education has been the lack of awareness and an indifferent attitude among parents and the community about the special needs of differently abled children. The Centre has made concerted efforts to network not merely to promote the concept but also to seek the active participation and involvement of the community in the activities of the organisation.

The CGC undertakes awareness building by maintaining constant interaction with parents and community in large numbers through communication diaries, P.T.A. meetings and general discussion group meetings.

Parents of differently abled children have formed their own support groups that not only provide support to each other but have also initiated vocational training projects to provide training and employment avenues for the differently abled children.

A full time library was started in 1990 by Amar Jyoti for the trainees of the Multi-Category Teachers Training Course as well as for research scholars for other organisations. A series of books have been published on Adaptation of Resource Material for training teachers in Special Education and Community Based Rehabilitation.

Apart from salaried teachers, the school has not only been able to attract enthusiastic and dedicated volunteers of all age groups from various walks of life but also sustain their motivation and maximise the scope of their inputs. Those associated with Amar Jyoti, from trustees to volunteers to donors, contribute to its resources and activities in their respective fields, such as accounts, legal affairs, communication, architecture, medicine, etc. These linkages form a vast network in which to spread the message of integration.

Openness to work with other schools and organisations has had numerous benefits in terms of changing attitudes and mainstreaming the concept. Various schools have started enrolling their teachers in the Multi Category Teachers Training Course. Trainees in different areas of special education are exchanged with other organisations working in that specific area, which is cost effective and has a qualitative impact. Accepting placement of students in diverse disciplines such as social work, architecture etc. has also resulted in meaningful exchange. Such interaction has been expanded to a global scale through various exchange programmes for short term placement of visiting professionals.

Amar Jyoti believes that education is empowerment and empowerment of children is accomplished by learning, through a participatory method, and developing skills for decision-making. Education also helps them to develop the ability to work together in any setting with a "win-win" concept. It also means that Amar Jyoti takes the child from the stage of dependency to independence and leads her/him into interdependency for team work in adult ventures.

SHAISHAV SCHOOL

Shaishav, a school located in Vadodara, provides educational facilities to physically and mentally healthy children (henceforth referred to as regular children) upto class XI, while Institute for Learning Disabled (INFLED) provides educational facilities to the developmentally challenged children (also referred to as children with special needs). Both these institutions are managed by the Vadodara Education Trust. Shaishav strives to carve a niche in society by providing educational services especially designed to facilitate and promote a unique integrated learning environment for the developmentally challenged and the regular school children. Through its special education programme, INFLED attempts to improve the educational level of developmentally challenged children sufficiently, so as to integrate them with the regular children at different levels in Shaishav .

In Shaishav, the integration of regular and developmentally challenged children is achieved in a variety of ways. The daily routine is organised in such a way that all children meet each other regularly for games, lunch and extra curricular activities. At an academic level, integration is either partial or total. When a child with special needs is found to be as competent as the regular school children only in selective subjects or in an activity like music, s/he joins the regular children for those particular activities. At a third level, total integration is arranged when a developmentally challenged child is in a position to participate in all aspects of the educational programme alongwith regular children. The objective of the school is to provide the developmentally challenged children an opportunity to develop alongwith regular children and at the same time provide opportunities for sensitisation of regular children towards developmentally challenged children. In this manner, both the groups of children develop a healthy perspective about realities of life.

STEPS TOWARDS INTEGRATION

Entry into INFLED. The institute has an intake capacity of 40 students. The admissions are primarily based on the child's medical report. For a few weeks after their admission, these students are observed by the teachers. If the teachers' observations are

in consonance with the medical report and they feel that the child will benefit from the programme being offered, only then the child is retained. Many times children are recommended directly by the parents or teachers of other schools. In such cases as well, the teachers of Shaishav observe the child informally as well as with the help of especially prepared checklists, and only when they are convinced that the child needs to be a part of the special education programme, do they confirm her/his admission to the school.

In the INFLED programme, children are divided into 4 groups that are formed on the basis of the child's mental age, reports of the doctors, and reports of teachers' observation. One teacher is assigned to each group. The focus in this programme is on general knowledge (through bulletins), science projects (like names of wild animals, birds etc.), vocational work (like preparing candles and greeting cards) and creative activities (like drawing and pasting). Although the four major groupings are based on the broad observations of children's capabilities, there is scope for inter-group mobility even within these four groups provided a child demonstrates a special aptitude or ability. An Individual Education Plan (IEP) is chalked out for every child and the syllabus is prepared at the beginning of the year suited to the children's level. A copy of this syllabus and the IEP of each child is shared with their respective parents. The purpose of this is to involve the parents in the entire process and provide them the necessary guidance to carry forward at home, what the child is learning at school, so that it is reinforced. This is also likely to facilitate the creation of a sense of harmony between the two learning environments for a child.

Moving to the integrated classrooms. Children are constantly observed and a formal evaluation is carried out twice a year. Although the format of the evaluation is based on the needs of each child, generally evaluation seeks to assess the progress made in motor activities (fine and gross), academic work (maths and language), behavioural aspects (emotional and social), vocational work and participation in different activities like taking interest in projects, in story telling and games. Based on the evaluation and the teacher's observation, a child is integrated into the regular school if s/he is found

capable of adapting to the regular curriculum. Until now, four students have been totally integrated in regular sections.

Monitoring and Facilitating Integration. Once children from INFLED are integrated in the regular classes at Shaishav, the teacher of this class and the teacher of INFLED meet regularly to discuss and work out solutions to the problems faced by the children in the integration process and to maintain a record of the child's progress. If a child has difficulties coping with the regular curriculum and does not progress sufficiently, then a decision to revert the child to the special section may be considered.

Supervision. Shaishav has four supervisors, one each for INFLED, the Shaishav K.G., primary and secondary sections. The supervisor of the secondary section is the head supervisor. The teachers plan their work on a weekly basis in a planning book. On Saturday, they hand over their plans to the supervisor, who returns it by Monday with feedback and suggestions.

While planning for the primary section is done class wise, for the senior section, it is done subjectwise. All the teachers of a class or of a specific subject sit together and jointly plan for the whole week. Similarly, all the four supervisors meet formally atleast once a week and share the progress made at various levels. The supervisors supervise the teaching and learning process in the classroom, provide feedback to the teachers and also engage in teaching.

Recruitment, training and orientation of teachers. Teachers are selected through interviews. The supervisors are members of the interview panel for recruitment of teachers to their respective area. Right at the time of the interview, the prospective teachers are informed about the component of integration that the school offers. Rather than giving importance to the academic qualifications of an applicant, weightage is given to his/her attitude towards teaching, working with children and importance is also given to the family background of the applicant.

Once recruited, training is provided to teachers on the basis of their specific needs. The Principal also guides and supports the teachers by providing necessary inputs whenever needed. Whenever a child is integrated in a class, the teacher of that particular class is

oriented in detail about that child's background, nature and extent of disability and his/her special needs. She then works in close collaboration with the child's former teacher and jointly they work out plans to help the child adjust and progress. The school actively encourages teachers' participation in training programs organised by different educational institutes.

Parents and community involvement. At the time of admissions, parents of regular children seeking admission to the school are informed and oriented about the integrated education programme offered by the school and explained about the possibility of their child studying and interacting with children with special needs. This is done to avoid any negative reactions in the future. Efforts are also made to facilitate interaction and promote understanding between parents of regular children and those with special needs, through forums such as parent-teacher and parent-principal meetings. The school also has a Parent-Teacher Association (PTA). Various positions of the PTA are shared by the teachers and parents. There are two parent representatives for each class and if parents have a complaint or a problem that they want to bring to the notice of the principal, they approach her through the parents' representative of their child's class. Meetings of the PTA are held regularly to review the progress in academics, discuss new development plans and seek the active help of parents in organising annual and ongoing events.

Food facilities. Since the beginning, the school made a conscious decision to offer meals, mainly to the developmentally challenged children and to the children in the Kindergarten. This has been guided by the need and importance of enabling these children to develop their motor skills through supervision and observing other children eating.

Avenues of interaction between developmentally challenged and regular children. In all the co-curricular activities like cultural day, funfair, sports day etc., children participate jointly. Teachers of both the institutions are involved in training the students for such activities. The senior students also help the teachers in this task. Besides these occasional functions, children meet each other daily and jointly participate in games and co-curricular activities.

Over the years, several indicators such as the content of the essays written by regular children, have reflected their positive feelings towards their friends in the INFLED programme. A regular child displaying sensitivity to a developmentally challenged child, and offering her/his co-operation to enhance the latter's adjustment and learning, is a common sight at Shaishav.

Benefits of integration. This kind of integration helps children with special needs to develop self reliance, a sense of personal adequacy, occupational competence and social competence through developing her/his interpersonal skills. It helps them to grow up to be happy, useful and self-dependent citizens and to realise their potential optimally. It aids in the all round personality development of regular children as well as in broadening their vision and accepting the realities of life. Positive attitudes formed during this period become a priceless possession of these children.

Resource mobilisation. Shaishav does not receive any grants from the State or Central government and raises its own resources through fees charged from students. Additionally, the principal utilises varied modes to mobilise resources and this includes organising charity shows, tapping personal and professional contacts and publishing souvenirs.

Linkages and networking. The principal has established contacts with various educational institutes and with international bodies concerned with children's welfare. She is a member of an association formed by the principals of selected schools of Vadodara.

FINDINGS AND DISCUSSION

The four schools considered in the present study, represent a very small cross section of the educational facilities available in the areas where they are located. However, they are representative of schools which have endeavoured to do things differently as compared to most other educational institutions. Table 1, in the previous section provides basic details about all four schools and indicates some of the common features of these schools. Following the table, are descriptive details that provide information on the range and nature of innovative activities in these schools and the unique way in which these activities are managed. The description also highlights that schools differ considerably in the range and breadth of innovations introduced and in the systems and procedures created to accomplish them. The duration, for which the four schools have been in existence, varies and this has implications for stabilization of various processes. For example, Bombay International School is the oldest of all these schools and has been in existence for more than thirty years, followed by Anandalaya, Amar Jyoti and Shaishav respectively. BIS is the only school which has seen a change in principals, five times since its establishment. Despite the diversity, evident from the above description, there seem to be factors, systems and procedures common to all the schools, which seem to have facilitated the practice of innovation. Some of these factors are described below:

Leadership

As described in the review of studies in section I, leadership in organizations is crucial for the successful implementation of innovations. In the four schools under consideration, there are distinct similarities in the behavioural characteristics of the principals/heads providing leadership to their institutions. Some of these dimensions have been highlighted below.

Support and Encouragement. Research indicates that different phases of innovation require different type of leadership (Roberts,1984). For example, the 'initiating' phase requires a 'nurturing' leadership, whereas the 'implementation' phase would require the'championing' type (Anderson and King, 1993).

Leadership in the three schools (Amar Jyoti, Anandalaya and Shaishav) at the time of their establishment, clearly supports this observation. For example at Anandalaya, when teachers were struggling with the new integrated curriculum and activity based teaching, principals shielded the teachers from all external influences. Whenever a parent complained or questioned the school's approach, the principal herself/himself assumed the responsibility of giving them a patient hearing and explaining to them the rationale of the school's decisions. Subsequently, when the school gained acceptance, parents were provided access to teachers for seeking clarifications. Similarly, at Amar Jyoti, the director of the organization and at Shaishav, the principal provided the teachers with the necessary support for trying out new approaches. In contrast, at BIS, where by now systems have considerably stabilized, the principal functions as a skilled facilitator and coordinator.

Networking. Of the four schools, three (BIS, Amar Jyoti and Shaishav) have extensive networking with the community and corporate leaders. At BIS, parents, who are members of a 'Parents' cooperative', contribute in a variety of ways; in addition, the principal has established several linkages with institutions like Tata Institute of Social Sciences and Haifa University for training of teachers. Similarly, Amar Jyoti gets extensive support from volunteers for various aspects of its functioning such as accounts, medical services, legal affairs and architecture. For an exposure to field realities, Amar Jyoti has volunteered to accept students from institutions like School of Social Work and Architecture, thereby facilitating mutual sharing and learning. The present principal of Shaishav, who is also its founder member, has established most of the infrastructure of the school with community support. She has also been able to network with several public and private organizations for getting specific activities and projects sponsored.

As the institution grows and gains acceptance in society, support from community members and organizations becomes easier. However in the initial phase, it is the leader who builds and activates the networks. The principals/heads in three schools (Amar Jyoti, Anandalaya and Shaishav) seem to have done this efficiently.

Openness in communication and team effort. The functioning styles of all the four principals and the organization of systems and processes in these schools are reflective of

the nature and ease of accessibility enjoyed by colleagues, decentralized pattern of communication and emphasis on team efforts. The principals of Amar Jyoti and Shaishav are available for consultations to teachers at any time of the day. While in the office, there are no restrictions for colleagues to approach them for consultation, even when at home, no time is odd for seeking their inputs. Similarly, in Anandalaya, besides holding regular meetings with teachers, the principal is also available for informal consultations. In all the four schools in many situations, the principals take a secondary position and allow their colleagues to take various responsibilities, thus providing ample scope and autonomy for the team to take initiative and develop their own way of doing things. This seems to be one of the key strength of these schools.

Besides the three dimensions mentioned above, it is possible to identify several others that are significant in the behavioural styles of principals of the four schools; however, the above three seem to be critical in their contribution to instituting systems and processes and enabling their growth. Some of the other systems and processes which have significant bearing on management of innovation in these schools have been discussed below.

Review and monitoring

All the schools have created elaborate systems of review and monitoring of various functions and procedures which facilitates management of innovation made by them. For example, Anandalaya, BIS and Shaishav have developed and standardized procedures for review of pedagogy and teaching. The introduction of log book to assist teachers in designing their teaching plan, seeking inputs from supervisors and reviewing the process in weekly meetings have all been standardized so that tasks are completed within a given time frame. Similarly, performance of subject coordinators is also reviewed on a regular basis. The schedule for supervision of teachers is also decided well in advance. All these processes provide reasonable autonomy with accountability and thus facilitate the smooth implementation of various innovative activities.

Mobilizing Community support

Though there is a variation in the degree and in the nature of support that different schools have been able to mobilize, this is yet another common feature amongst these schools. Community support is the highest in BIS which functions as a Parents' Cooperative, followed by Amar Jyoti which has been able to create substantial infrastructure, as well as conduct regular activities (almost all the doctors providing medical services at the Centre are volunteers) through support received from individuals and institutions in the community. Shaishav has created a joint Parent-Teacher Committee, in which positions of responsibility are shared equally by representatives of parents as well as teachers. Through the support provided by these committees and members of the board, the school has been able to mobilize resources for its infrastructure and many of its activities. If measured in financial terms, the support received is enormous. Had this support not been activated, it may not have even been possible for schools to generate such grants to sustain the innovations made by them. An equally important aspect of this support relates to the social awareness and a sense of social responsibility generated within and by these supporters. Secondly, by regularly participating in planning and conducting the activities, parents and other community members become regular stake holders in running the school. Creating such multiple stake holders helps to sustain and further expand linkages with the community. This is particularly true of BIS, where five principals have come and gone, without affecting the basic characteristics of the school, because the core committee of parents ensures that continuity is maintained.

Creating linkages - far and wide

Apart from seeking support from parents of school children, which in itself is quite unique, these schools have also established linkages and sought support from a variety of institutions, within the country and abroad. For example, Shaishav in its formative years, received a token grant from Tata foundation and now is in the process of getting a larger project funded by them. BIS has been able to send its teachers for training in Israel, United Kingdom and U.S.A. and are in the process of establishing links with Pakistan. Similarly, Amar Jyoti has established linkages with several national and international agencies like Rehabilitation International and Canadian Cross Roads for seeking professional support and expertise in areas of need. Besides bringing in valuable resources, such linkages bring

richness of knowledge, experience and background of other individuals and organizations who are not directly involved in the school. As a result, children and teachers also get varied forms of exposure and are not limited to the confines of the school.

Teachers' selection, training and growth

All the four schools accord utmost priority to recruitment, training and upgradation of skills and knowledge of their teachers. Since schools are recognized by a board (state or central), they are governed by the guidelines of their respective boards for recruitment of teachers. For example, they must follow the minimum qualifications prescribed by the board for recruitment of teachers. Although this is being uniformly adhered to, each school has also developed additional criteria that are given due weightage and importance while recruiting teachers. For example, Shaishav gives preference to individuals from well settled families and who are seeking a job not merely for money, but also for job satisfaction and creative outlets. The school also considers important the family background of the teacher. Besides considering the academic merits of an individual, Anandalaya also places a special value on her/his curiosity to learn, discover and love for children. Similarly, other things being equal, BIS prefers individuals who seem to have skills and attitudes that are likely to promote smooth team functioning. The chances of selection, of a person who is an academic achiever, but is not found befitting in terms of criteria valued by the school, are rather low.

All the schools follow a well defined system of orienting their newly recruited teachers to the school system before assigning them major responsibilities. Usually, the new teachers get sufficient opportunity to interact with experienced teachers before the academic session. In Anandalaya, new teachers are not expected to assume teaching responsibilities for the initial period. Instead, they observe and work in close association with other teachers before assuming independent responsibility of teaching. Once integrated into the system, they are deputed periodically for training and attending workshops. Wide networking of these schools with institutions within the country and abroad has facilitated in providing exposure to teachers in new areas of knowledge and skills. Every year, BIS earmarks certain portion of its annual budget for teacher training. The number of hours that teachers in these schools are expected to spend on teaching is much less as compared

to other schools in the community. They spend almost fifty percent of their working time on other activities including extra curricular activities, planning, supervising and administrative duties. This distribution of their teaching time has helped to provide sufficient space to teachers to plan other activities. It has also contributed significantly in their personal and professional growth. Two of the four schools (BIS and Anandalaya) also give slightly higher salaries to their teachers than other schools. All these measures prove immensely valuable in the growth of teachers and convey a sense of importance that the school attaches to the growth of its faculty.

Decentralized and participative management

All the four schools are characterized by decentralized and participative management, though the degree of these two processes varies in each school. For example, in Anandalaya, planning, teaching and evaluation of various subjects are managed by different subject coordinators. The extra curricular activities are conducted through houses which are managed by a group of teachers and headed by one of them who is the leader. Inter house coordination is done by another person who is the 'coordinator'. These roles and responsibilities are rotated so that the teachers get to know and work with different teachers and students. For administrative work, a detailed list of duties has been generated and based on this teachers are assigned different duties by rotation. Thus the scope for any sort of favouritism or partiality, in the assignment of duties, is minimized. In BIS, there are ten different committees of parents and senior teachers through which activities of the school are conducted. Decentralized, participative management of this nature improves the quality of decisions, induces ownership thus ensuring smooth implementation of functions.

Smooth vertical and horizontal communication

The ease of communication in upward as well as downward direction and horizontal communication among peers is another common characteristic in all the four schools. In Shaishav, the principal has clearly communicated to all the teachers that she can be approached anytime, anywhere. At Amar Jyoti, the supportive role of the director has brought considerable warmth and openness in the system and the functioning is marked by

cordiality. One reason for high retention rate of its staff is the congeniality of the work place. Similarly in BIS and Anandalaya, principals appear to be one among equals, thereby reducing the communication barriers that are often induced by a hierarchical structure.

Horizontal communication is facilitated by cross-functional and cross-subject teams, which are constituted through periodical rotation. These teams also create interdependence and thus an inherent need to interact. Since all the duties and responsibilities are assumed for a limited period and shared by all the teachers, everyone has developed a good understanding about difficulties involved in various duties and are therefore willing to provide support. Frequent and necessary task related interaction among peers also reduces the scope of misunderstandings and facilitates group cohesiveness.

Emergence of processes and systems unique to the respective schools

As described earlier, each school engages in unique activities through means suitable to them. This has resulted in emergence of systems and procedures which are also specific and unique. For example in BIS `class mother' is a person who is a link between the class teacher and other parents, who are willing to organize activities specially for that particular class. Similarly, in Anandalaya, `Group teacher' and `Group Coordinator' organize and coordinate activities of different groups, which are unique to the school.

Some other systems that have emerged include `Duty' lists, `Special Duty lists' and `Log book' for planning and organizing teaching activities. In Amar Jyoti, integrated sports meet was initially organized at the school level and later at a national level. This has provided a forum which fulfills their objective and also generates tremendous goodwill. Similarly, at Shaishav, various cultural festivals organized every year, have become a rallying point for parents and school to come together. These activities and processes represent a vast range but what is significant is that they have evolved as per the specific requirements of the school.

Institutionalization of systems and procedure

This is yet another feature that is significant from the point of view of innovation in an institution. All the committees, procedures, and processes described above are organized in a manner, so that they function regardless of the individual who is handling them. Various processes and systems of review, monitoring and participative decision making or functioning of committees have all been institutionalized and accepted by teachers, staff and students. Similarly, records and documents are meticulously maintained. Old records can be retrieved with ease. BIS and Anandalaya, which are bigger institutions and have been in existence for a longer time as compared to Shaishav and Amar Jyoti, have more well established systems and procedures.

OVERVIEW

The preceding discussion provides clear pointers regarding factors which are facilitative and help to promote and sustain innovations. Leadership is undoubtedly the key element, which stands out in all the four schools. This is particularly true, because a leader not only provides support and encouragement but also provides direction. Since its establishment and until it has attained stability, a leader provides operational as well as strategic inputs. In this sense, the role of a leader in an innovative school becomes similar to that of a Pioneering-Innovative (PI) Entrepreneur who looks after all the aspects of the organization (Ramachandran and Ramnarayan, 1993). The communication style of the principals in the four schools, their networking behaviour and relationship with faculty and staff are all significant pointers in this direction. In addition, the decentralized structures in these schools facilitate the formation of conducive climates for innovation, which substantiates previous research (Kanter, 1983). Factors such as an optimal team size, clarity of goals and free communication enable the initiation and sustenance of innovation in the schools.

If one were to analyze the nature of innovation in these schools, most of the innovative practices would predominantly fall in the 'process' category rather than 'product'. For example, innovative teaching is a main activity in all the schools. To facilitate this, formation of committees, group coordinators, supervision and support of parents and groups has been mobilized. Building classrooms or creating other facilities were meant to

facilitate or augment the innovative activities rather than being an end in themselves. In this context, it seems only natural that these schools would give considerable attention to the recruitment, retention and growth of their teachers.

Implications for Management

The findings of the study have helped to highlight several factors which are important from the point of view of managing innovations in school. Some of those are being discussed here.

Innovations are not resource intensive. The four schools studied are not very resource rich. The fees being charged by the school are governed by the norms of State Government and are comparable to several other schools in the city. At Amar Jyoti, education is provided free. Only nominal charges are levied for transport. The infrastructure like building, furniture and teaching equipment are all functional and designed according to specific needs of children. The salary being paid to teachers in these schools is also not radically different from other schools. In BIS, it is comparatively higher whereas at Amar Jyoti, teachers get a consolidated salary that is less than other government schools. Still these schools are able to provide education which might be qualitatively better than certain other schools which have similar or better resources. The key factor, lies probably, in the commitment of leadership who in turn are able to create, manage, and sustain processes and systems which are conducive to innovation. Certain level of resources and financial incentives are not only important but also essential. However, as indicated by researchers (King and Coventry, 1992; Payne 1990) more resources do not necessarily mean better performance. A reasonable level of resources are of course essential, but beyond that it is the enterprising spirit which is important. From a managerial perspective, the challenge lies in mobilizing the available resources in the community, which these schools have done.

Innovation in schools do not require extra ordinary or exceptional individuals. The details of the schools provided in the previous sections indicate clearly that principals and teachers of these schools are similar to many other schools in the area in terms of their qualification, background, and experience. Still, as a team they have been able to evolve

programmes in their schools which are qualitatively different from other schools. This is apparently linked to the facilitative institutional environment, which provides encouragement for being creative and provides support for practice of innovations. In addition, the work schedules followed do not impose a burden on the teachers, and infact help them to realize their optimum potential. Many of us have innovative ideas, which would germinate and grow provided they receive an appropriate environment. This is substantiated by various innovative endeavours such as the Eklavya group in Hoshangabad, Madhya Pradesh and the Social Work and Research Centre, Tilonia, Rajasthan (ASTRA, 1998) as also by the schools in question.

Innovations in schools require sustained effort of a group of individuals over a long period of time. It has been mentioned earlier, that the different schools are at varied stages of implementing innovations and hence the extent to which the systems and procedures have stabilized also differ. Many things were tried, some of which succeeded, while others did not. However, the efforts of trying, sharing, and retrying continue unabated. This spirit of experimentation seems to be the key for emergence and sustenance of innovations. Perseverance, team effort and a spirit of experimentation seem to be the key for the success of innovations.

Multiple stakeholders in schools facilitate continuity of innovation. Since BIS was established, there has been a change in the principal five times. However, this has not interfered with the basic character of the school. Anandalaya is in the process of changing its principal. In the other two schools, there has been no change in the leadership. However, the BIS experience indicates that in an organization with multiple stakeholders who are committed to the achievement of its goals, there is a greater probability of maintaining continuity in the system and processes.

DIRECTIONS FOR FUTURE RESEARCH

The preceding discussion highlights the importance of certain factors and how they can be helpful in managing innovations in schools. However, there are certain other aspects which might be important for innovations in schools that have not been covered by this study.

Factors inhibiting innovations in schools. The schools considered in the study were those which have successfully implemented innovations. Therefore, the factors that facilitate innovations were identifiable. Certain other factors which might inhibit innovations in schools, could not be identified in this study. In order to get a complete picture of innovation in educational institutions, it might be worthwhile to study such institutions that have initiated innovations but could not sustain them.

Teachers and their role in innovation. Various systems and processes in schools are geared towards the fulfillment of the objectives and the participation of teachers and staff is a critical element. These processes ensure that teachers are able to contribute in realizing the overall mission of school. However, the level of individual creativity of teachers and the extent to which it is fostered and facilitated by their respective schools could not be ascertained by the study. Any innovative organization has to continuously evolve and practice innovations. This can be possible only if individual members constantly experiment with new ideas and the institution provides the necessary support. The organizational processes and mechanisms that will promote and sustain such initiatives at individual level, could be a promising area for research.

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